

Sex Differences in Psychosocial Quality of Life of Long-Term Melanoma Survivors

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OBJECTIVE

- To determine the impact melanoma diagnosis and treatment have on psychosocial quality of life (QOL) of long-term survivors.
- Explore potential sex differences

BACKGROUND

- Melanoma is a serious type of skin cancer and the incidence has been increasing
- Change in (QOL) is an acknowledged health outcome of cancer survivors
- QOL in melanoma survivors is understudied
- Little is known about QOL changes and melanoma survivorship

METHODS

Study population

- Subjects were recruited from the Skin Health Study, a case-control study conducted in Minnesota from 2004-2009
- Cases were age 25-59 at the time of diagnosis

Data collection

- Subjects were contacted via mail for a paper or online survey
- Three extra reminder letters and a physical copy of the survey were sent to those who did not respond
- Data collected reflected psychosocial impacts on survivors after diagnosis
- Emotional well-being, social interactions, and life outlook were measured

Data analysis

- A total of 724 long-term melanoma survivors completed the follow-up survey (291 males, 433 females)
- Outcomes were analyzed by sex using Chi-square, Fisher’s Exact, and Wilcoxon Rank Sum tests as appropriate
- P-values <0.05 were considered significant

RESULTS

- Females responded more strongly to positive outlooks on life compared to males.
- Females felt a stronger sense of faith or spirituality, felt more grateful to be alive, and realized that time is precious as a result of melanoma (Table 1).

Table 1. Impact of Cancer Life Outlook Subscale Items by Sex

Question	Males					Females					p-value
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
I feel grateful to be alive.	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	
I feel like time in my life is limited.	4 (1.4)	5 (1.8)	50 (17.9)	119 (42.7)	101 (36.2)	5 (1.2)	2 (0.5)	41 (9.9)	154 (37.1)	213 (51.3)	0.0002
I learned something about life because of having melanoma.	68 (24.4)	83 (29.8)	68 (24.4)	46 (16.5)	14 (5.0)	146 (35.3)	119 (28.7)	78 (18.8)	54 (13.0)	17 (4.1)	0.03
I worry about my future.	6 (2.2)	16 (5.8)	77 (27.7)	143 (51.4)	36 (13.0)	8 (1.9)	23 (5.5)	89 (21.5)	203 (48.9)	92 (22.2)	0.03
I feel like time in my life is running out.	69 (24.7)	109 (39.1)	67 (24.0)	32 (11.5)	2 (0.7)	113 (27.4)	122 (29.6)	106 (25.7)	62 (15.1)	9 (2.2)	0.06
Having had melanoma has made me realize that time is precious.	47 (16.8)	98 (35.0)	80 (28.6)	54 (19.3)	1 (0.4)	144 (34.8)	142 (34.3)	78 (18.8)	43 (10.4)	7 (1.7)	<0.001
Having had melanoma has strengthened my religious faith or my sense of spirituality.	6 (2.1)	12 (4.3)	65 (23.2)	155 (55.4)	42 (15.0)	10 (2.4)	20 (4.8)	104 (25.2)	179 (43.3)	100 (24.2)	0.02
	26 (9.3)	41 (14.7)	115 (41.2)	71 (25.5)	26 (9.3)	23 (5.5)	63 (15.2)	144 (34.7)	118 (28.4)	67 (16.1)	0.02

- Compared to males, results suggest females had more difficulty coping with their diagnosis and more concerns with their appearance (Table 2)
- Females responded significantly higher on all items regarding fear (Table 2).

Table 2. QOL Cancer Survivors-Psychological Well-Being Subscale by Sex. (0 to 100)

Question	Males		Females		p-value
	N	Median (Min, Max)	N	Median (Min, Max)	
How difficult is it for you to cope today as a result of your melanoma diagnosis?	287	0.0 (0.0, 100.0)	416	0.5 (0.0, 80.0)	0.003
Has your melanoma diagnosis or treatment caused changes in your appearance?	287	1.0 (0.0, 93.0)	416	6.0 (0.0, 100.0)	0.001
Has your illness or treatment cause changes in your self-concept?	287	0.0 (0.0, 80.0)	416	2.0 (0.0, 100.0)	0.01
How distressing was the initial diagnosis	285	80.0 (0.0, 100.0)	415	90.0 (0.0, 100.0)	<0.0001
How much anxiety do you have?	284	10.0 (0.0, 97.0)	413	14.0 (0.0, 100.0)	0.002
<i>To what extent are you fearful of:</i>					
Future diagnostic tests	285	19.0 (0.0, 100.0)	415	30.0 (0.0, 100.0)	<0.0001
A second melanoma	284	31.0 (0.0, 100.0)	411	50.0 (0.0, 100.0)	<0.0001
Recurrence of your melanoma	285	25.0 (0.0, 100.0)	415	48.0 (0.0, 100.0)	<0.0001
Spreading (metastasis) of your melanoma	284	20.0 (0.0, 100.0)	413	30.0 (0.0, 100.0)	0.001
Dying from melanoma	285	20.0 (0.0, 100.0)	415	25.0 (0.0, 100.0)	0.01
Children/Other family members getting melanoma	284	34.0 (0.0, 100.0)	415	50.0 (0.0, 100.0)	<0.0001

- Most social facets of survivor’s life were not significantly different by sex after melanoma diagnosis or treatment.
- Both males and females felt as if they are receiving adequate support, and felt their melanoma has been somewhat distressing for their family (Table 3).

Table 3. QOL Cancer Survivors-Social Concern Subscale by Sex. (0 to 100)

Question	Males		Females		p-value
	N	Median (Min, Max)	N	Median (Min, Max)	
How distressing has melanoma been for your family?	284	25.0 (0.0, 100.0)	415	30.0 (0.0, 100.0)	0.11
Is the amount of support you receive from others sufficient to meet your needs?	282	92.0 (0.0, 100.0)	414	94.0 (0.0, 100.0)	0.69
To what degree has your melanoma and treatment interfered with your employment?	265	0.0 (0.0, 100.0)	376	0.0 (0.0, 100.0)	0.48
To what degree has your melanoma and treatment interfered with your activities at home?	284	0.0 (0.0, 90.0)	415	0.0 (0.0, 90.0)	0.59
How much isolation do you feel is caused by your melanoma or treatment?	284	0.0 (0.0, 59.0)	415	0.0 (0.0, 99.0)	0.31
How much financial burden have you incurred as a result of your melanoma and treatment?	280	0.0 (0.0, 100.0)	414	0.0 (0.0, 100.0)	0.30

CONCLUSIONS

- Females seem to be influenced more significantly compared to males regarding both positive and negative aspects of life after melanoma diagnosis
- This study suggests a need for differing support based on sex following a melanoma diagnosis

